

Simulation Results for BarberSaloon3.java

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*** Barber Saloon Simulation 1 ***

*** Parameters (panel of configuration) ***

nClients= 25, the nr total of clients
nChairs= 4, the nr total of chairs (=> barber chair included).
minTimeHairCut= 15.0, the minimum fixed time for hair cut (minutes).
variableTimeCut= 15.0, for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0, for max time between hair cuts (minutes).
maxTimeBetweenClients= 120.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins= 187, the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.

*** Begin Simulation Barber Saloon (Sleeping Barber) ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 3. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.37 minutes...
Barber begins hair cut of 19.58 minutes. ClientId: 0 Freechairs = 3 Cut? false.
Client id=0 begins hair cut of 19.58 minutes.
Client id=0 ends hair cut of 19.58 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 1.
*** Client id=0 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 1 ***

Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 26.45 minutes. ClientId: 1 Freechairs = 3 Cut? false.
Client id=1 begins hair cut of 26.45 minutes.
Client id=1 ends hair cut of 26.45 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 2.
*** Client id=1 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 2 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 28.5 minutes. ClientId: 2 Freechairs = 3 Cut? false.
Client id=2 begins hair cut of 28.5 minutes.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 2. Trials: 1.
Client id=2 ends hair cut of 28.5 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 3.
*** Client id=2 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 3 ***

Barber begins hair cut of 21.39 minutes. ClientId: 3 Freechairs = 3 Cut? false.
Client id=3 begins hair cut of 21.39 minutes.
Client id=3 ends hair cut of 21.39 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 4.
*** Client id=3 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 4 ***

Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 27.85 minutes. ClientId: 4 Freechairs = 3 Cut? false.
Client id=4 begins hair cut of 27.85 minutes.
Client id=4 ends hair cut of 27.85 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 5.
*** Client id=4 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 5 ***

Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 15.39 minutes. ClientId: 5 Freechairs = 3 Cut? false.
Client id=5 begins hair cut of 15.39 minutes.
Client id=5 ends hair cut of 15.39 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 6.
*** Client id=5 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 6 ***

Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 27.96 minutes. ClientId: 6 Freechairs = 3 Cut? false.
Client id=6 begins hair cut of 27.96 minutes.
Client id=6 ends hair cut of 27.96 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 7.
*** Client id=6 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 7 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 17.13 minutes. ClientId: 7 Freechairs = 3 Cut? false.
Client id=7 begins hair cut of 17.13 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 17.13 minutes. ClientId: 7 Freechairs = 2 Cut? false.
Client id=7 ends hair cut of 17.13 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 8.
*** Client id=7 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 8 ***

Client id=8 begins hair cut of 21.4 minutes.
Client id=8 ends hair cut of 21.4 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 9.
*** Client id=8 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 9 ***

Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 3. Trials: 1.
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Barber begins hair cut of 28.84 minutes. ClientId: 9 Freechairs = 3 Cut? false.
Client id=9 begins hair cut of 28.84 minutes.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 28.84 minutes. ClientId: 9 Freechairs = 2 Cut? false.
Client id=9 ends hair cut of 28.84 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 10.
*** Client id=9 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 10 ***

Client id=10 begins hair cut of 16.81 minutes.
Client id=10 ends hair cut of 16.81 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 11 ***

Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 3. Trials: 1.
Client id=11 begins hair cut of 20.18 minutes.
Barber begins hair cut of 20.18 minutes. ClientId: 11 Freechairs = 3 Cut? false.
Client id=11 ends hair cut of 20.18 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 20.61 minutes. ClientId: 12 Freechairs = 3 Cut? false.
Client id=12 begins hair cut of 20.61 minutes.
Client id=12 ends hair cut of 20.61 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 28.82 minutes. ClientId: 13 Freechairs = 3 Cut? false.
Client id=13 begins hair cut of 28.82 minutes.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 2. Trials: 1.
Client id=13 ends hair cut of 28.82 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 14 ***

Barber begins hair cut of 19.42 minutes. ClientId: 14 Freechairs = 3 Cut? false.
Client id=14 begins hair cut of 19.42 minutes.
Client id=14 ends hair cut of 19.42 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 15 ***

Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 20.98 minutes. ClientId: 15 Freechairs = 3 Cut? false.
Client id=15 begins hair cut of 20.98 minutes.
Client id=15 ends hair cut of 20.98 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 16 ***

Client id= 16 arrives. Client id=16 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 28.64 minutes. ClientId: 16 Freechairs = 3 Cut? false.
Client id=16 begins hair cut of 28.64 minutes.
Client id=16 ends hair cut of 28.64 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 17.
*** Client id=16 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 17 ***

Client id= 17 arrives. Client id=17 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 18.06 minutes. ClientId: 17 Freechairs = 3 Cut? false.
Client id=17 begins hair cut of 18.06 minutes.
Client id=17 ends hair cut of 18.06 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 18.
*** Client id=17 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 18 ***

Client id= 18 arrives. Client id=18 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 20.6 minutes. ClientId: 18 Freechairs = 3 Cut? false.
Client id=18 begins hair cut of 20.6 minutes.
Client id=18 ends hair cut of 20.6 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 19.
*** Client id=18 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 19 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 19 arrives. Client id=19 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 21.98 minutes. ClientId: 19 Freechairs = 3 Cut? false.
Client id=19 begins hair cut of 21.98 minutes.
Client id=19 ends hair cut of 21.98 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 20.
*** Client id=19 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 20 ***

Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 15.77 minutes. ClientId: 20 Freechairs = 3 Cut? false.
Client id=20 begins hair cut of 15.77 minutes.
Client id=20 ends hair cut of 15.77 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 21.
*** Client id=20 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 21 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 21 arrives. Client id=21 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 22.87 minutes. ClientId: 21 Freechairs = 3 Cut? false.
```

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```
Client id=21 begins hair cut of 22.87 minutes.
Client id=21 ends hair cut of 22.87 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 22.
*** Client id=21 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 22 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 22 arrives. Client id=22 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 22.88 minutes. ClientId: 22 Freechairs = 3 Cut? false.
Client id=22 begins hair cut of 22.88 minutes.
Client id=22 ends hair cut of 22.88 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 23.
*** Client id=22 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 23 ***

Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 3. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.23 minutes...
Client id=23 begins hair cut of 17.58 minutes.
Client id=23 ends hair cut of 17.58 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 24.
*** Client id=23 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 24 ***

Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 28.38 minutes. ClientId: 24 Freechairs = 3 Cut? false.
Client id=24 begins hair cut of 28.38 minutes.
Client id=24 ends hair cut of 28.38 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 25.
*** Client id=24 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
*** Summary of Clients (threads) finished (joined) ***
```

```
Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.     Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.
```

**** End Simulation ****



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*** Barber Saloon Simulation 2 ***

*** Parameters (panel of configuration) ***

nClients= 25, the nr total of clients
nChairs= 5, the nr total of chairs (=> barber chair included).
minTimeHairCut= 15.0, the minimum fixed time for hair cut (minutes).
```

Simulation Results for BarberSaloon3.java

```
variableTimeCut=      15.0,    for max variable time in hair cut (minutes).
maxTimeBetweenCuts=   1.0,    for max time between hair cuts (minutes).
maxTimeBetweenClients= 80.0,  for max arrival time between 2 clients (minutes).
pauseBeforeJoins=     187,    the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.

***      Begin Simulation Barber Saloon (Sleeping Barber)      ***

Client id= 0 arrives.
>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.   Client id=0 seats and waits. Freechairs = 4. Trials:
1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.67 minutes...
    Client id=0 begins hair cut of 15.28 minutes.
    Barber begins hair cut of 15.28 minutes. ClientId: 0 Freechairs = 4 Cut? false.
    Client id=0 ends hair cut of 15.28 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 1.
    *** Client id=0 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 1 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 19.13 minutes. ClientId: 1 Freechairs = 4 Cut? false.
    Client id=1 begins hair cut of 19.13 minutes.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 3. Trials: 1.
    Client id=1 ends hair cut of 19.13 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 2.
    *** Client id=1 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 2 ***

    Barber begins hair cut of 27.28 minutes. ClientId: 2 Freechairs = 4 Cut? false.
    Client id=2 begins hair cut of 27.28 minutes.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 3. Trials: 1.
    Client id=2 ends hair cut of 27.28 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 3.
    *** Client id=2 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 3 ***

    Client id=3 begins hair cut of 23.02 minutes.
    Barber begins hair cut of 23.02 minutes. ClientId: 3 Freechairs = 4 Cut? false.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 3. Trials: 1.
    Client id=3 ends hair cut of 23.02 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 4.
    *** Client id=3 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 4 ***

    Client id=4 begins hair cut of 27.33 minutes.
    Barber begins hair cut of 27.33 minutes. ClientId: 4 Freechairs = 4 Cut? false.
Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 3. Trials: 1.
    Client id=4 ends hair cut of 27.33 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 5.
    *** Client id=4 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 5 ***

    Client id=5 begins hair cut of 18.92 minutes.
    Barber begins hair cut of 18.92 minutes. ClientId: 5 Freechairs = 4 Cut? false.
    Client id=5 ends hair cut of 18.92 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 6.
    *** Client id=5 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 6 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 15.32 minutes. ClientId: 6 Freechairs = 4 Cut? false.
    Client id=6 begins hair cut of 15.32 minutes.
    Client id=6 ends hair cut of 15.32 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 7.
    *** Client id=6 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 7 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 25.17 minutes. ClientId: 7 Freechairs = 4 Cut? false.
    Client id=7 begins hair cut of 25.17 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 3. Trials: 1.
    Barber begins hair cut of 25.17 minutes. ClientId: 7 Freechairs = 3 Cut? false.
    Client id=7 ends hair cut of 25.17 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 8.
    *** Client id=7 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 8 ***

    Client id=8 begins hair cut of 23.08 minutes.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 3. Trials: 1.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
    Client id=8 ends hair cut of 23.08 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
    *** Client id=8 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 9 ***

    Client id=9 begins hair cut of 18.14 minutes.
    Barber begins hair cut of 18.14 minutes. ClientId: 9 Freechairs = 3 Cut? false.
    Client id=9 ends hair cut of 18.14 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 10.
    *** Client id=9 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 10 ***
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Simulation Results for BarberSaloon3.java

```
Client id=10 begins hair cut of 18.34 minutes.
Barber begins hair cut of 18.34 minutes. ClientId: 10 Freechairs = 4 Cut? false.
Client id=10 ends hair cut of 18.34 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 11 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 15.5 minutes. ClientId: 11 Freechairs = 4 Cut? false.
Client id=11 begins hair cut of 15.5 minutes.
Client id=11 ends hair cut of 15.5 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 17.12 minutes. ClientId: 12 Freechairs = 4 Cut? false.
Client id=12 begins hair cut of 17.12 minutes.
Client id=12 ends hair cut of 17.12 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 20.4 minutes. ClientId: 13 Freechairs = 4 Cut? false.
Client id=13 begins hair cut of 20.4 minutes.
Client id=13 ends hair cut of 20.4 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 14 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 26.39 minutes. ClientId: 14 Freechairs = 4 Cut? false.
Client id=14 begins hair cut of 26.39 minutes.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 3. Trials: 1.
Client id= 16 arrives. Client id=16 seats and waits. Freechairs = 2. Trials: 1.
Client id=14 ends hair cut of 26.39 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 15 ***

Barber begins hair cut of 25.66 minutes. ClientId: 15 Freechairs = 3 Cut? false.
Client id=15 begins hair cut of 25.66 minutes.
Barber begins hair cut of 25.66 minutes. ClientId: 15 Freechairs = 3 Cut? false.
Client id=15 ends hair cut of 25.66 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 16 ***

Client id=16 begins hair cut of 18.61 minutes.
Client id= 17 arrives. Client id=17 seats and waits. Freechairs = 3. Trials: 1.
Client id=16 ends hair cut of 18.61 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 17.
*** Client id=16 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 17 ***

Client id=17 begins hair cut of 20.49 minutes.
Barber begins hair cut of 20.49 minutes. ClientId: 17 Freechairs = 4 Cut? false.
Client id=17 ends hair cut of 20.49 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 18.
*** Client id=17 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 18 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 18 arrives. Client id=18 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 29.8 minutes. ClientId: 18 Freechairs = 4 Cut? false.
Client id=18 begins hair cut of 29.8 minutes.
Client id=18 ends hair cut of 29.8 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 19.
*** Client id=18 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 19 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 19 arrives. Client id=19 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 24.61 minutes. ClientId: 19 Freechairs = 4 Cut? false.
Client id=19 begins hair cut of 24.61 minutes.
Client id=19 ends hair cut of 24.61 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 20.
*** Client id=19 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 20 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 23.34 minutes. ClientId: 20 Freechairs = 4 Cut? false.
Client id=20 begins hair cut of 23.34 minutes.
Client id=20 ends hair cut of 23.34 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 21.
*** Client id=20 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 21 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 21 arrives.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.6 minutes... Client id=21 seats and waits.
Freechairs = 4. Trials: 1.
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```
Client id=21 begins hair cut of 16.69 minutes.
Client id=21 ends hair cut of 16.69 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 22.
*** Client id=21 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 22 ***

Client id= 22 arrives. Client id=22 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 23.35 minutes. ClientId: 22 Freechairs = 4 Cut? false.
Client id=22 begins hair cut of 23.35 minutes.
Client id=22 ends hair cut of 23.35 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 23.
*** Client id=22 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 23 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 24.22 minutes. ClientId: 23 Freechairs = 4 Cut? false.
Client id=23 begins hair cut of 24.22 minutes.
Client id=23 ends hair cut of 24.22 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 24.
*** Client id=23 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 24 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 25.51 minutes. ClientId: 24 Freechairs = 4 Cut? false.
Client id=24 begins hair cut of 25.51 minutes.
Client id=24 ends hair cut of 25.51 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 25.
*** Client id=24 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.     Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.

      ****                      End Simulation                      ****

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***                      Barber Saloon Simulation 3                      ***

***                      Parameters                      (panel of configuration)                      ***

nClients=                25,      the nr total of clients
nChairs=                  5,      the nr total of chairs (=> barber chair included).
minTimeHairCut=           15.0,   the minimum fixed time for hair cut (minutes).
variableTimeCut=          15.0,   for max variable time in hair cut (minutes).
maxTimeBetweenCuts=       1.0,    for max time between hair cuts (minutes).
maxTimeBetweenClients=   80.0,    for max arrival time between 2 clients (minutes).
pauseBeforeJoins=        187,    the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair=4,    the nr total of attempts to cut hair per client.

***                      Begin Simulation Barber Saloon (Sleeping Barber)                      ***
```


Simulation Results for BarberSaloon3.java



Our Lady of Fatima 1917 was very Beautiful

Nossa Senhora de Fátima era muito linda

She asked us to pray the Rosary everyday.

She asked also the correct consecration of Russia
to her Immaculate heart. Otherwise, Russia
would spread its errors all over the world:
communisms/socialisms, orthodoxy...

```
Client id= 0 arrives.
>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.   Client id=0 seats and waits. Freechairs = 4. Trials:
1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.67 minutes...
    Client id=0 begins hair cut of 15.28 minutes.
    Barber begins hair cut of 15.28 minutes. ClientId: 0 Freechairs = 4 Cut? false.
    Client id=0 ends hair cut of 15.28 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 1.
    *** Client id=0 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 1 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 19.13 minutes. ClientId: 1 Freechairs = 4 Cut? false.
    Client id=1 begins hair cut of 19.13 minutes.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 3. Trials: 1.
    Client id=1 ends hair cut of 19.13 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 2.
    *** Client id=1 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 2 ***

    Barber begins hair cut of 27.28 minutes. ClientId: 2 Freechairs = 4 Cut? false.
    Client id=2 begins hair cut of 27.28 minutes.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 3. Trials: 1.
    Client id=2 ends hair cut of 27.28 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 3.
    *** Client id=2 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 3 ***

    Client id=3 begins hair cut of 23.02 minutes.
    Barber begins hair cut of 23.02 minutes. ClientId: 3 Freechairs = 4 Cut? false.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 3. Trials: 1.
    Client id=3 ends hair cut of 23.02 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 4.
    *** Client id=3 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 4 ***

    Client id=4 begins hair cut of 27.33 minutes.
    Barber begins hair cut of 27.33 minutes. ClientId: 4 Freechairs = 4 Cut? false.
Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 3. Trials: 1.
    Client id=4 ends hair cut of 27.33 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 5.
    *** Client id=4 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 5 ***

    Client id=5 begins hair cut of 18.92 minutes.
    Barber begins hair cut of 18.92 minutes. ClientId: 5 Freechairs = 4 Cut? false.
    Client id=5 ends hair cut of 18.92 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 6.
    *** Client id=5 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 6 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 15.32 minutes. ClientId: 6 Freechairs = 4 Cut? false.
```

Simulation Results for BarberSaloon3.java

```
Client id=6 begins hair cut of 15.32 minutes.
Client id=6 ends hair cut of 15.32 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 7.
*** Client id=6 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 7 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 25.17 minutes. ClientId: 7 Freechairs = 4 Cut? false.
Client id=7 begins hair cut of 25.17 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 25.17 minutes. ClientId: 7 Freechairs = 3 Cut? false.
Client id=7 ends hair cut of 25.17 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 8.
*** Client id=7 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 8 ***

Client id=8 begins hair cut of 23.08 minutes.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 3. Trials: 1.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
Client id=8 ends hair cut of 23.08 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
*** Client id=8 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 9 ***

Client id=9 begins hair cut of 18.14 minutes.
Barber begins hair cut of 18.14 minutes. ClientId: 9 Freechairs = 3 Cut? false.
Client id=9 ends hair cut of 18.14 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 10.
*** Client id=9 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 10 ***

Client id=10 begins hair cut of 18.34 minutes.
Barber begins hair cut of 18.34 minutes. ClientId: 10 Freechairs = 4 Cut? false.
Client id=10 ends hair cut of 18.34 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 11 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 15.5 minutes. ClientId: 11 Freechairs = 4 Cut? false.
Client id=11 begins hair cut of 15.5 minutes.
Client id=11 ends hair cut of 15.5 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 17.12 minutes. ClientId: 12 Freechairs = 4 Cut? false.
Client id=12 begins hair cut of 17.12 minutes.
Client id=12 ends hair cut of 17.12 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 20.4 minutes. ClientId: 13 Freechairs = 4 Cut? false.
Client id=13 begins hair cut of 20.4 minutes.
Client id=13 ends hair cut of 20.4 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 14 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 26.39 minutes. ClientId: 14 Freechairs = 4 Cut? false.
Client id=14 begins hair cut of 26.39 minutes.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 3. Trials: 1.
Client id= 16 arrives. Client id=16 seats and waits. Freechairs = 2. Trials: 1.
Client id=14 ends hair cut of 26.39 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 15 ***

Barber begins hair cut of 25.66 minutes. ClientId: 15 Freechairs = 3 Cut? false.
Client id=15 begins hair cut of 25.66 minutes.
Barber begins hair cut of 25.66 minutes. ClientId: 15 Freechairs = 3 Cut? false.
Client id=15 ends hair cut of 25.66 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 16 ***

Client id=16 begins hair cut of 18.61 minutes.
Client id= 17 arrives. Client id=17 seats and waits. Freechairs = 3. Trials: 1.
Client id=16 ends hair cut of 18.61 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 17.
*** Client id=16 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 17 ***

Client id=17 begins hair cut of 20.49 minutes.
Barber begins hair cut of 20.49 minutes. ClientId: 17 Freechairs = 4 Cut? false.
Client id=17 ends hair cut of 20.49 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 18.
*** Client id=17 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 18 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 18 arrives. Client id=18 seats and waits. Freechairs = 4. Trials: 1.
```


Simulation Results for BarberSaloon3.java

```
Barber begins hair cut of 29.8 minutes. ClientId: 18 Freechairs = 4 Cut? false.
Client id=18 begins hair cut of 29.8 minutes.
Client id=18 ends hair cut of 29.8 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 19.
*** Client id=18 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 19 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 19 arrives. Client id=19 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 24.61 minutes. ClientId: 19 Freechairs = 4 Cut? false.
Client id=19 begins hair cut of 24.61 minutes.
Client id=19 ends hair cut of 24.61 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 20.
*** Client id=19 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 20 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 23.34 minutes. ClientId: 20 Freechairs = 4 Cut? false.
Client id=20 begins hair cut of 23.34 minutes.
Client id=20 ends hair cut of 23.34 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 21.
*** Client id=20 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 21 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 21 arrives.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.6 minutes... Client id=21 seats and waits.
Freechairs = 4. Trials: 1.
Client id=21 begins hair cut of 16.69 minutes.
Client id=21 ends hair cut of 16.69 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 22.
*** Client id=21 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 22 ***

Client id= 22 arrives. Client id=22 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 23.35 minutes. ClientId: 22 Freechairs = 4 Cut? false.
Client id=22 begins hair cut of 23.35 minutes.
Client id=22 ends hair cut of 23.35 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 23.
*** Client id=22 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 23 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 24.22 minutes. ClientId: 23 Freechairs = 4 Cut? false.
Client id=23 begins hair cut of 24.22 minutes.
Client id=23 ends hair cut of 24.22 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 24.
*** Client id=23 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 24 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 25.51 minutes. ClientId: 24 Freechairs = 4 Cut? false.
Client id=24 begins hair cut of 25.51 minutes.
Client id=24 ends hair cut of 25.51 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 25.
*** Client id=24 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.     Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.

****                                End Simulation                                ****

*****

***                                Barber Saloon Simulation 4                                ***

***                                Parameters                                (panel of configuration)                                ***

nClients=                25,        the nr total of clients
nChairs=                  4,        the nr total of chairs (=> barber chair included).
```

Simulation Results for BarberSaloon3.java

```
minTimeHairCut=      15.0,   the minimum fixed time for hair cut (minutes).
variableTimeCut=     15.0,   for max variable time in hair cut (minutes).
maxTimeBetweenCuts=  1.0,   for max time between hair cuts (minutes).
maxTimeBetweenClients= 60.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins=    187,   the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.

***      Begin Simulation Barber Saloon (Sleeping Barber)      ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 3. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.34 minutes...
      Barber begins hair cut of 16.76 minutes. ClientId: 0 Freechairs = 3 Cut? false.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 2. Trials: 1.
      Client id=0 begins hair cut of 16.76 minutes.
      Client id=0 ends hair cut of 16.76 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 1.
      *** Client id=0 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 1 ***

      Barber begins hair cut of 28.26 minutes. ClientId: 1 Freechairs = 3 Cut? false.
      Client id=1 begins hair cut of 28.26 minutes.
      Client id=1 ends hair cut of 28.26 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 2.
      *** Client id=1 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 2 ***

Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 26.5 minutes. ClientId: 2 Freechairs = 3 Cut? false.
      Client id=2 begins hair cut of 26.5 minutes.
      Client id=2 ends hair cut of 26.5 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 3.
      *** Client id=2 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 3 ***

Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 25.45 minutes. ClientId: 3 Freechairs = 3 Cut? false.
      Client id=3 begins hair cut of 25.45 minutes.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 2. Trials: 1.
      Client id=3 ends hair cut of 25.45 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 4.
      *** Client id=3 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 4 ***

      Barber begins hair cut of 23.14 minutes. ClientId: 4 Freechairs = 3 Cut? false.
      Client id=4 begins hair cut of 23.14 minutes.
Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 2. Trials: 1.
      Client id=4 ends hair cut of 23.14 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 5.
      *** Client id=4 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 5 ***

      Barber begins hair cut of 28.86 minutes. ClientId: 5 Freechairs = 3 Cut? false.
      Client id=5 begins hair cut of 28.86 minutes.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 2. Trials: 1.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 1. Trials: 1.
      Client id=5 ends hair cut of 28.86 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 6.
      *** Client id=5 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 6 ***

      Client id=6 begins hair cut of 28.4 minutes.
      Barber begins hair cut of 28.4 minutes. ClientId: 6 Freechairs = 2 Cut? false.
      Client id=6 ends hair cut of 28.4 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 7.
      *** Client id=6 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 7 ***

      Barber begins hair cut of 28.04 minutes. ClientId: 7 Freechairs = 3 Cut? false.
      Client id=7 begins hair cut of 28.04 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 2. Trials: 1.
      Client id=7 ends hair cut of 28.04 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 8.
      *** Client id=7 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 8 ***

      Barber begins hair cut of 23.84 minutes. ClientId: 8 Freechairs = 3 Cut? false.
      Client id=8 begins hair cut of 23.84 minutes.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 2. Trials: 1.
      Client id=8 ends hair cut of 23.84 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
      *** Client id=8 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 9 ***

      Barber begins hair cut of 29.61 minutes. ClientId: 9 Freechairs = 3 Cut? false.
      Client id=9 begins hair cut of 29.61 minutes.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
      Barber begins hair cut of 29.61 minutes. ClientId: 9 Freechairs = 2 Cut? false.
      Client id=9 ends hair cut of 29.61 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 10.
      *** Client id=9 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 10 ***

      Client id=10 begins hair cut of 17.89 minutes.
```

Simulation Results for BarberSaloon3.java

```
Client id=10 ends hair cut of 17.89 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 11 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 24.76 minutes. ClientId: 11 Freechairs = 3 Cut? false.
Client id=11 begins hair cut of 24.76 minutes.
Client id=11 ends hair cut of 24.76 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 16.77 minutes. ClientId: 12 Freechairs = 3 Cut? false.
Client id=12 begins hair cut of 16.77 minutes.
Client id=12 ends hair cut of 16.77 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 13 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 25.02 minutes. ClientId: 13 Freechairs = 3 Cut? false.
Client id=13 begins hair cut of 25.02 minutes.
Client id=13 ends hair cut of 25.02 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 14 ***

Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 23.46 minutes. ClientId: 14 Freechairs = 3 Cut? false.
Client id=14 begins hair cut of 23.46 minutes.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 2. Trials: 1.
Client id=14 ends hair cut of 23.46 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 15 ***

Barber begins hair cut of 26.92 minutes. ClientId: 15 Freechairs = 3 Cut? false.
Client id=15 begins hair cut of 26.92 minutes.
Client id= 16 arrives. Client id=16 seats and waits. Freechairs = 2. Trials: 1.
Client id=15 ends hair cut of 26.92 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 16 ***

Client id=16 begins hair cut of 25.57 minutes.
Barber begins hair cut of 25.57 minutes. ClientId: 16 Freechairs = 3 Cut? false.
Client id= 17 arrives. Client id=17 seats and waits. Freechairs = 2. Trials: 1.
Client id=16 ends hair cut of 25.57 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 17.
*** Client id=16 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 17 ***

Client id=17 begins hair cut of 20.99 minutes.
Barber begins hair cut of 20.99 minutes. ClientId: 17 Freechairs = 3 Cut? false.
Client id=17 ends hair cut of 20.99 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 18.
*** Client id=17 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 18 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 18 arrives. Client id=18 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 23.26 minutes. ClientId: 18 Freechairs = 3 Cut? false.
Client id=18 begins hair cut of 23.26 minutes.
Client id= 19 arrives. Client id=19 seats and waits. Freechairs = 2. Trials: 1.
Client id=18 ends hair cut of 23.26 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 19.
*** Client id=18 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 19 ***

Barber begins hair cut of 25.62 minutes. ClientId: 19 Freechairs = 3 Cut? false.
Client id=19 begins hair cut of 25.62 minutes.
Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 2. Trials: 1.
Client id= 21 arrives. Client id=21 seats and waits. Freechairs = 1. Trials: 1.
Barber begins hair cut of 25.62 minutes. ClientId: 19 Freechairs = 1 Cut? false.
Client id=19 ends hair cut of 25.62 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 20.
*** Client id=19 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 20 ***

Client id=20 begins hair cut of 22.01 minutes.
Client id= 22 arrives. Client id=22 seats and waits. Freechairs = 1. Trials: 1.
Client id=20 ends hair cut of 22.01 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 21.
*** Client id=20 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 21 ***

Client id=21 begins hair cut of 26.65 minutes.
Barber begins hair cut of 26.65 minutes. ClientId: 21 Freechairs = 2 Cut? false.
Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 1. Trials: 1.
Client id=21 ends hair cut of 26.65 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 22.
*** Client id=21 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 22 ***

Client id=22 begins hair cut of 23.84 minutes.
```

Simulation Results for BarberSaloon3.java

```
Barber begins hair cut of 23.84 minutes. ClientId: 22 Freechairs = 2 Cut? false.
Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 1. Trials: 1.
Client id=22 ends hair cut of 23.84 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 23.
*** Client id=22 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 23 ***

Client id=23 begins hair cut of 26.02 minutes.
Barber begins hair cut of 26.02 minutes. ClientId: 23 Freechairs = 2 Cut? false.
Client id=23 ends hair cut of 26.02 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 24.
*** Client id=23 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 24 ***

Client id=24 begins hair cut of 18.26 minutes.
Barber begins hair cut of 18.26 minutes. ClientId: 24 Freechairs = 3 Cut? false.
Client id=24 ends hair cut of 18.26 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 25.
*** Client id=24 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
*** Summary of Clients (threads) finished (joined) ***
```

```
Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.     Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.
```

*** End Simulation ***

*** Barber Saloon Simulation 5 ***

*** Parameters (panel of configuration) ***

```
nClients=      25,      the nr total of clients
nChairs=       5,      the nr total of chairs (=> barber chair included).
minTimeHairCut= 15.0,   the minimum fixed time for hair cut (minutes).
variableTimeCut= 15.0,  for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0, for max time between hair cuts (minutes).
maxTimeBetweenClients= 30.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins= 187,  the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.
```

*** Begin Simulation Barber Saloon (Sleeping Barber) ***

```
>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 4. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.61 minutes...
Client id=0 begins hair cut of 26.47 minutes.
Barber begins hair cut of 26.47 minutes. ClientId: 0 Freechairs = 4 Cut? false.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 3. Trials: 1.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 2. Trials: 1.
Client id=0 ends hair cut of 26.47 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 1.
*** Client id=0 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 1 ***

Client id=1 begins hair cut of 20.04 minutes.
Barber begins hair cut of 20.04 minutes. ClientId: 1 Freechairs = 3 Cut? false.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 2. Trials: 1.
Client id=1 ends hair cut of 20.04 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 2.
*** Client id=1 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 2 ***

Client id=2 begins hair cut of 20.86 minutes.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 20.86 minutes. ClientId: 2 Freechairs = 2 Cut? false.
Client id=2 ends hair cut of 20.86 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 3.
*** Client id=2 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 3 ***

Client id=3 begins hair cut of 17.99 minutes.
```

Simulation Results for BarberSaloon3.java

```
Barber begins hair cut of 17.99 minutes. ClientId: 3 Freechairs = 3 Cut? false.
Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 2. Trials: 1.
Client id=3 ends hair cut of 17.99 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 4.
*** Client id=3 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 4 ***

Client id=4 begins hair cut of 15.17 minutes.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 15.17 minutes. ClientId: 4 Freechairs = 2 Cut? false.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 1. Trials: 1.
Client id=4 ends hair cut of 15.17 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 5.
*** Client id=4 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 5 ***

Client id=5 begins hair cut of 21.03 minutes.
Barber begins hair cut of 21.03 minutes. ClientId: 5 Freechairs = 2 Cut? false.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 1. Trials: 1.
Client id=5 ends hair cut of 21.03 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 6.
*** Client id=5 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 6 ***

Client id=6 begins hair cut of 27.91 minutes.
Barber begins hair cut of 27.91 minutes. ClientId: 6 Freechairs = 2 Cut? false.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 1. Trials: 1.
Client id=6 ends hair cut of 27.91 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 7.
*** Client id=6 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 7 ***

Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 1. Trials: 1.
Client id=7 begins hair cut of 16.47 minutes.
Barber begins hair cut of 16.47 minutes. ClientId: 7 Freechairs = 1 Cut? false.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 0. Trials: 1.
Client id=7 ends hair cut of 16.47 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 8.
*** Client id=7 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 8 ***

Client id=8 begins hair cut of 27.71 minutes.
Barber begins hair cut of 27.71 minutes. ClientId: 8 Freechairs = 1 Cut? false.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 0. Trials: 1.
Client id=8 ends hair cut of 27.71 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 9.
*** Client id=8 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 9 ***

Client id=9 begins hair cut of 21.38 minutes.
Barber begins hair cut of 21.38 minutes. ClientId: 9 Freechairs = 1 Cut? false.
Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 0. Trials: 1.
Client id=9 ends hair cut of 21.38 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 10.
*** Client id=9 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 10 ***

Client id=10 begins hair cut of 15.31 minutes.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 0. Trials: 1.
Barber begins hair cut of 15.31 minutes. ClientId: 10 Freechairs = 0 Cut? false.
Client id=10 ends hair cut of 15.31 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 11 ***

Client id=11 begins hair cut of 20.71 minutes.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 0. Trials: 1.
Barber begins hair cut of 20.71 minutes. ClientId: 11 Freechairs = 0 Cut? false.
Client id= 16 arrives. Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 1.
Client id=11 ends hair cut of 20.71 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 12 ***

Client id=12 begins hair cut of 27.85 minutes.
Client id= 16 arrives again. Client id=16 seats and waits. Freechairs = 0. Trials: 2.
Barber begins hair cut of 27.85 minutes. ClientId: 12 Freechairs = 0 Cut? false.
Client id= 17 arrives. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 18 arrives. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 19 arrives. Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 1.
Client id=12 ends hair cut of 27.85 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id=13 begins hair cut of 21.63 minutes.
Barber begins hair cut of 21.63 minutes. ClientId: 13 Freechairs = 1 Cut? false.
Client id= 19 arrives again. Client id=19 seats and waits. Freechairs = 0. Trials: 2.
Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 18 arrives again. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 2.
```

Simulation Results for BarberSaloon3.java

```
Client id=13 ends hair cut of 21.63 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 14 ***

Client id=14 begins hair cut of 23.02 minutes.
Barber begins hair cut of 23.02 minutes. ClientId: 14 Freechairs = 1 Cut? false.
Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 0. Trials: 1.
Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 18 arrives again. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 18 arrives again. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=18 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 15 ***

Client id=14 ends hair cut of 23.02 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 16 ***

Client id=15 begins hair cut of 25.17 minutes.
Client id= 21 arrives. Client id=21 seats and waits. Freechairs = 0. Trials: 1.
Barber begins hair cut of 25.17 minutes. ClientId: 15 Freechairs = 0 Cut? false.
Client id= 22 arrives. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=17 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 17 ***

Client id= 22 arrives again. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 22 arrives again. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 3.

Client id=15 ends hair cut of 25.17 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 18 ***

Client id=16 begins hair cut of 25.24 minutes.
Barber begins hair cut of 25.24 minutes. ClientId: 16 Freechairs = 1 Cut? false.
Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 0. Trials: 1.
Client id= 22 arrives again. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=22 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 19 ***

Client id=16 ends hair cut of 25.24 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 17.
*** Client id=16 departed. Freechairs = 1. Hair cut? true. Trials? 2. Clients departed: 20 ***

Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 0. Trials: 1.
Client id=19 begins hair cut of 22.64 minutes.
Barber begins hair cut of 22.64 minutes. ClientId: 19 Freechairs = 0 Cut? false.
Client id=19 ends hair cut of 22.64 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 18.
*** Client id=19 departed. Freechairs = 1. Hair cut? true. Trials? 2. Clients departed: 21 ***

Client id=20 begins hair cut of 15.89 minutes.
Barber begins hair cut of 15.89 minutes. ClientId: 20 Freechairs = 1 Cut? false.
Client id=20 ends hair cut of 15.89 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 19.
*** Client id=20 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 22 ***

Client id=21 begins hair cut of 28.66 minutes.
Barber begins hair cut of 28.66 minutes. ClientId: 21 Freechairs = 2 Cut? false.
Client id=21 ends hair cut of 28.66 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 20.
*** Client id=21 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 23 ***

Client id=23 begins hair cut of 17.28 minutes.
Barber begins hair cut of 17.28 minutes. ClientId: 23 Freechairs = 3 Cut? false.
Client id=23 ends hair cut of 17.28 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 21.
*** Client id=23 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 24 ***

Client id=24 begins hair cut of 28.01 minutes.
Barber begins hair cut of 28.01 minutes. ClientId: 24 Freechairs = 4 Cut? false.
Client id=24 ends hair cut of 28.01 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 22.
*** Client id=24 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
```


Simulation Results for BarberSaloon3.java

```
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.     Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.

****                                     ****

*****

***                                     ***

***                                     ***
Parameters          (panel of configuration)

nClients=           25,      the nr total of clients
nChairs=             4,      the nr total of chairs (=> barber chair included).
minTimeHairCut=     15.0,    the minimum fixed time for hair cut (minutes).
variableTimeCut=    15.0,    for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0,     for max time between hair cuts (minutes).
maxTimeBetweenClients= 6.0,  for max arrival time between 2 clients (minutes).
pauseBeforeJoins=   187,     the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.

***                                     ***
Begin Simulation Barber Saloon (Sleeping Barber)

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 3. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.36 minutes...
Client id=0 begins hair cut of 23.33 minutes.
Barber begins hair cut of 23.33 minutes. ClientId: 0 Freechairs = 3 Cut? false.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 2. Trials: 1.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 1. Trials: 1.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 0. Trials: 1.
Client id= 4 arrives. Saloon full. Client id=4 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 5 arrives. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 6 arrives. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 7 arrives. Saloon full. Client id=7 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 4 arrives again. Saloon full. Client id=4 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 8 arrives. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 1.

Client id=0 ends hair cut of 23.33 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 1.
*** Client id=0 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 1 ***

Barber begins hair cut of 17.24 minutes. ClientId: 1 Freechairs = 1 Cut? false.
Client id=1 begins hair cut of 17.24 minutes.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 0. Trials: 1.
Client id= 7 arrives again. Saloon full. Client id=7 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 10 arrives. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 11 arrives. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 4 arrives again. Saloon full. Client id=4 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 12 arrives. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 13 arrives. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 1.
```

Simulation Results for BarberSaloon3.java

```
Client id=1 ends hair cut of 17.24 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 2.
*** Client id=1 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 2 ***

Barber begins hair cut of 21.34 minutes. ClientId: 2 Freechairs = 1 Cut? false.
Client id= 4 arrives again. Client id=4 seats and waits. Freechairs = 0. Trials: 4.
Client id=2 begins hair cut of 21.34 minutes.
Client id= 14 arrives. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 11 arrives again. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 12 arrives again. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 15 arrives. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 11 arrives again. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 16 arrives. Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 14 arrives again. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=5 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 3 ***

Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 7 arrives again. Saloon full. Client id=7 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 17 arrives. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 14 arrives again. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 18 arrives. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=8 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 4 ***

Client id= 12 arrives again. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 3.

Barber begins hair cut of 21.34 minutes. ClientId: 2 Freechairs = 0 Cut? false.
Client id=2 ends hair cut of 21.34 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 3.
*** Client id=2 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 5 ***

Client id=3 begins hair cut of 22.65 minutes.
Client id= 14 arrives again. Client id=14 seats and waits. Freechairs = 0. Trials: 4.
Client id= 11 arrives again. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=11 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 6 ***

Client id= 19 arrives. Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 16 arrives again. Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 20 arrives. Saloon full. Client id=20 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 7 arrives again. Saloon full. Client id=7 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=7 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 7 ***

Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 3.
```

Simulation Results for BarberSaloon3.java

```
Client id= 15 arrives again.           Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 20 arrives again.           Saloon full. Client id=20 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 21 arrives.                 Saloon full. Client id=21 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 22 arrives.                 Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 6 arrives again.            Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=6 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 8 ***
Client id= 23 arrives.                 Saloon full. Client id=23 comes maybe later. Freechairs = 0. Trials: 1.
Client id= 18 arrives again.           Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 2.
    Barber begins hair cut of 22.65 minutes. ClientId: 3 Freechairs = 0 Cut? false.
    Client id=3 ends hair cut of 22.65 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 4.
    *** Client id=3 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 9 ***
    Client id=9 begins hair cut of 27.36 minutes.
Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 0. Trials: 1.
Client id= 18 arrives again.           Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 18 arrives again.           Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=18 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 10 ***
Client id= 12 arrives again.           Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=12 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 11 ***
Client id= 19 arrives again.           Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 16 arrives again.           Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 13 arrives again.           Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=13 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 12 ***
Client id= 16 arrives again.           Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=16 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 13 ***
Client id= 19 arrives again.           Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 15 arrives again.           Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 17 arrives again.           Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=17 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 14 ***
Client id= 20 arrives again.           Saloon full. Client id=20 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 23 arrives again.           Saloon full. Client id=23 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 21 arrives again.           Saloon full. Client id=21 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 20 arrives again.           Saloon full. Client id=20 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=20 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 15 ***
Client id= 22 arrives again.           Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 10 arrives again.           Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=10 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 16 ***
    Barber begins hair cut of 27.36 minutes. ClientId: 9 Freechairs = 0 Cut? false.
Client id= 19 arrives again.           Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=19 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 17 ***
    Client id=9 ends hair cut of 27.36 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 5.
    *** Client id=9 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 18 ***
```

Simulation Results for BarberSaloon3.java

```
Client id=4 begins hair cut of 18.73 minutes.
Client id= 23 arrives again. Client id=23 seats and waits. Freechairs = 0. Trials: 3.
Client id= 15 arrives again. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=15 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 19 ***

Client id= 21 arrives again. Saloon full. Client id=21 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 21 arrives again. Saloon full. Client id=21 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=21 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 20 ***

Client id= 22 arrives again. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 3.

Client id=4 ends hair cut of 18.73 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 6.
*** Client id=4 departed. Freechairs = 1. Hair cut? true. Trials? 4. Clients departed: 21 ***

Client id=14 begins hair cut of 19.82 minutes.
Barber begins hair cut of 19.82 minutes. ClientId: 14 Freechairs = 1 Cut? false.
Client id= 22 arrives again. Client id=22 seats and waits. Freechairs = 0. Trials: 4.
Client id=14 ends hair cut of 19.82 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 7.
*** Client id=14 departed. Freechairs = 1. Hair cut? true. Trials? 4. Clients departed: 22 ***

Client id=24 begins hair cut of 22.52 minutes.
Barber begins hair cut of 22.52 minutes. ClientId: 24 Freechairs = 1 Cut? false.
Client id=24 ends hair cut of 22.52 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 8.
*** Client id=24 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 23 ***

Client id=23 begins hair cut of 28.64 minutes.
Barber begins hair cut of 28.64 minutes. ClientId: 23 Freechairs = 2 Cut? false.
Client id=23 ends hair cut of 28.64 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
*** Client id=23 departed. Freechairs = 3. Hair cut? true. Trials? 3. Clients departed: 24 ***

Client id=22 begins hair cut of 25.62 minutes.
Barber begins hair cut of 25.62 minutes. ClientId: 22 Freechairs = 3 Cut? false.
Client id=22 ends hair cut of 25.62 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 10.
*** Client id=22 departed. Freechairs = 4. Hair cut? true. Trials? 4. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined. Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined. Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined. Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined. Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined. Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined. Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined. Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined. Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined. Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined. Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined. Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined. Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.

**** End Simulation ****

*****

*** Barber Saloon Simulation 7 ***

*** Parameters (panel of configuration) ***

nClients= 16, the nr total of clients
nChairs= 4, the nr total of chairs (=> barber chair included).
minTimeHairCut= 15.0, the minimum fixed time for hair cut (minutes).
variableTimeCut= 15.0, for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0, for max time between hair cuts (minutes).
maxTimeBetweenClients= 5.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins= 120, the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.

*** Begin Simulation Barber Saloon (Sleeping Barber) ***
```

Simulation Results for BarberSaloon3.java

```
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 3. Trials: 1.
    Barber begins hair cut of 15.25 minutes. ClientId: 0 Freechairs = 3 Cut? false.
    Client id=0 begins hair cut of 15.25 minutes.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 2. Trials: 1.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 1. Trials: 1.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 0. Trials: 1.
Client id= 4 arrives. Saloon full. Client id=4 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 5 arrives. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 6 arrives. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 1.

    Barber begins hair cut of 15.25 minutes. ClientId: 0 Freechairs = 0 Cut? false.
    Client id=0 ends hair cut of 15.25 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 1.
    *** Client id=0 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 1 ***

    Client id=1 begins hair cut of 16.5 minutes.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 0. Trials: 1.
Client id= 8 arrives. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 9 arrives. Saloon full. Client id=9 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 10 arrives. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 9 arrives again. Saloon full. Client id=9 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 11 arrives. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 2.

    Barber begins hair cut of 16.5 minutes. ClientId: 1 Freechairs = 0 Cut? false.
Client id= 12 arrives. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 1.

    Client id=1 ends hair cut of 16.5 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 2.
    *** Client id=1 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 2 ***

Client id= 4 arrives again. Client id=4 seats and waits. Freechairs = 0. Trials: 2.
    Client id=2 begins hair cut of 27.47 minutes.
Client id= 13 arrives. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 14 arrives. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 15 arrives. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 9 arrives again. Saloon full. Client id=9 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 4.

    *** Client id=10 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 3 ***

Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 14 arrives again. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 2.

    Barber begins hair cut of 27.47 minutes. ClientId: 2 Freechairs = 0 Cut? false.
Client id= 12 arrives again. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 9 arrives again. Saloon full. Client id=9 comes maybe later. Freechairs = 0. Trials: 4.

    *** Client id=9 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 4 ***
```

Simulation Results for BarberSaloon3.java

```
Client id= 11 arrives again.           Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 5 arrives again.           Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=5 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 5 ***
Client id= 13 arrives again.          Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 6 arrives again.           Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=6 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 6 ***
Client id= 11 arrives again.          Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 3.
    Client id=2 ends hair cut of 27.47 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 3.
    *** Client id=2 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 7 ***
    Client id=3 begins hair cut of 25.2 minutes.
Client id= 13 arrives again. Client id=13 seats and waits. Freechairs = 0. Trials: 4.
Client id= 14 arrives again.          Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 15 arrives again.          Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 12 arrives again.          Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 8 arrives again.           Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=8 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 8 ***
    Barber begins hair cut of 25.2 minutes. ClientId: 3 Freechairs = 0 Cut? false.
Client id= 11 arrives again.          Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=11 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 9 ***
Client id= 15 arrives again.          Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 12 arrives again.          Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=12 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 10 ***
    Client id=3 ends hair cut of 25.2 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 4.
    *** Client id=3 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 11 ***
    Client id=7 begins hair cut of 19.0 minutes.
Client id= 14 arrives again. Client id=14 seats and waits. Freechairs = 0. Trials: 4.
    Barber begins hair cut of 19.0 minutes. ClientId: 7 Freechairs = 0 Cut? false.
    Client id=7 ends hair cut of 19.0 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 5.
    *** Client id=7 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 12 ***
    Client id=4 begins hair cut of 17.88 minutes.
Client id= 15 arrives again. Client id=15 seats and waits. Freechairs = 0. Trials: 4.
    Barber begins hair cut of 17.88 minutes. ClientId: 4 Freechairs = 0 Cut? false.
    Client id=4 ends hair cut of 17.88 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 6.
    *** Client id=4 departed. Freechairs = 1. Hair cut? true. Trials? 2. Clients departed: 13 ***
    Client id=13 begins hair cut of 16.06 minutes.
    Barber begins hair cut of 16.06 minutes. ClientId: 13 Freechairs = 1 Cut? false.
    Client id=13 ends hair cut of 16.06 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 7.
    *** Client id=13 departed. Freechairs = 2. Hair cut? true. Trials? 4. Clients departed: 14 ***
    Client id=14 begins hair cut of 21.74 minutes.
    Barber begins hair cut of 21.74 minutes. ClientId: 14 Freechairs = 2 Cut? false.
    Client id=14 ends hair cut of 21.74 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 8.
    *** Client id=14 departed. Freechairs = 3. Hair cut? true. Trials? 4. Clients departed: 15 ***
    Client id=15 begins hair cut of 21.53 minutes.
    Client id=15 ends hair cut of 21.53 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 9.
    *** Client id=15 departed. Freechairs = 4. Hair cut? true. Trials? 4. Clients departed: 16 ***

    *** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
```


Simulation Results for BarberSaloon3.java

```
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
```

```
****                      End Simulation                      ****
```

```
***                      Barber Saloon Simulation 8          ***
***                      Parameters          (panel of configuration)          ***
```

```
nClients=          16,      the nr total of clients
nChairs=            5,      the nr total of chairs (=> barber chair included).
minTimeHairCut=     15.0,   the minimum fixed time for hair cut (minutes).
variableTimeCut=    15.0,   for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0,    for max time between hair cuts (minutes).
maxTimeBetweenClients= 30.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins=   120,    the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 3, the nr total of attempts to cut hair per client.
```

```
***                      Begin Simulation Barber Saloon (Sleeping Barber)      ***
```

```
>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 16.58 minutes. ClientId: 0 Freechairs = 4 Cut? false.
Client id=0 begins hair cut of 16.58 minutes.
Client id=0 ends hair cut of 16.58 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 1.
*** Client id=0 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 1 ***
```

```
>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 15.83 minutes. ClientId: 1 Freechairs = 4 Cut? false.
Client id=1 begins hair cut of 15.83 minutes.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 15.83 minutes. ClientId: 1 Freechairs = 3 Cut? false.
Client id=1 ends hair cut of 15.83 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 2.
*** Client id=1 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 2 ***
```

```
Client id=2 begins hair cut of 22.25 minutes.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 22.25 minutes. ClientId: 2 Freechairs = 3 Cut? false.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 2. Trials: 1.
Client id=2 ends hair cut of 22.25 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 3.
*** Client id=2 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 3 ***
```

```
Client id=3 begins hair cut of 27.95 minutes.
Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 27.95 minutes. ClientId: 3 Freechairs = 2 Cut? false.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 1. Trials: 1.
Client id=3 ends hair cut of 27.95 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 4.
*** Client id=3 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 4 ***
```

```
Client id=4 begins hair cut of 18.99 minutes.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 1. Trials: 1.
Barber begins hair cut of 18.99 minutes. ClientId: 4 Freechairs = 1 Cut? false.
Client id=4 ends hair cut of 18.99 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 5.
*** Client id=4 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 5 ***
```

```
Client id=5 begins hair cut of 27.86 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 1. Trials: 1.
Barber begins hair cut of 27.86 minutes. ClientId: 5 Freechairs = 1 Cut? false.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 0. Trials: 1.
Client id=5 ends hair cut of 27.86 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 6.
*** Client id=5 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 6 ***
```

```
Client id=6 begins hair cut of 26.58 minutes.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 0. Trials: 1.
Client id= 11 arrives. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 1.
```

```
Barber begins hair cut of 26.58 minutes. ClientId: 6 Freechairs = 0 Cut? false.
```

Simulation Results for BarberSaloon3.java

```
Client id= 12 arrives.           Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 1.

    Client id=6 ends hair cut of 26.58 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 7.
    *** Client id=6 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 7 ***

    Client id=7 begins hair cut of 18.88 minutes.
Client id= 11 arrives again. Client id=11 seats and waits. Freechairs = 0. Trials: 2.
    Barber begins hair cut of 18.88 minutes. ClientId: 7 Freechairs = 0 Cut? false.
    Client id=7 ends hair cut of 18.88 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 8.
    *** Client id=7 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 8 ***

    Client id=8 begins hair cut of 26.23 minutes.
Client id= 12 arrives again. Client id=12 seats and waits. Freechairs = 0. Trials: 2.
Client id= 13 arrives.           Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 14 arrives.           Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 1.

    Barber begins hair cut of 26.23 minutes. ClientId: 8 Freechairs = 0 Cut? false.
Client id= 15 arrives.           Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 1.

    Client id=8 ends hair cut of 26.23 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 9.
    *** Client id=8 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 9 ***

Client id= 14 arrives again. Client id=14 seats and waits. Freechairs = 0. Trials: 2.
    Client id=9 begins hair cut of 20.18 minutes.
Client id= 13 arrives again.           Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 13 arrives again.           Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 3.

    *** Client id=13 departed. Freechairs = 0. Hair cut? false. Trials? 3. Clients departed: 10 ***

Client id= 15 arrives again.           Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 2.

    Barber begins hair cut of 20.18 minutes. ClientId: 9 Freechairs = 0 Cut? false.
    Client id=9 ends hair cut of 20.18 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 10.
    *** Client id=9 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 11 ***

    Client id=10 begins hair cut of 29.57 minutes.
Client id= 15 arrives again. Client id=15 seats and waits. Freechairs = 0. Trials: 3.
    Barber begins hair cut of 29.57 minutes. ClientId: 10 Freechairs = 0 Cut? false.
    Client id=10 ends hair cut of 29.57 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 11.
    *** Client id=10 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 12 ***

    Client id=11 begins hair cut of 17.42 minutes.
    Client id=11 ends hair cut of 17.42 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 12.
    *** Client id=11 departed. Freechairs = 2. Hair cut? true. Trials? 2. Clients departed: 13 ***

    Client id=12 begins hair cut of 21.02 minutes.
    Barber begins hair cut of 21.02 minutes. ClientId: 12 Freechairs = 2 Cut? false.
    Client id=12 ends hair cut of 21.02 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 13.
    *** Client id=12 departed. Freechairs = 3. Hair cut? true. Trials? 2. Clients departed: 14 ***

    Barber begins hair cut of 22.05 minutes. ClientId: 14 Freechairs = 3 Cut? false.
    Client id=14 begins hair cut of 22.05 minutes.
    Barber begins hair cut of 22.05 minutes. ClientId: 14 Freechairs = 3 Cut? false.
    Client id=14 ends hair cut of 22.05 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 14.
    *** Client id=14 departed. Freechairs = 4. Hair cut? true. Trials? 2. Clients departed: 15 ***

    Client id=15 begins hair cut of 27.52 minutes.
    Client id=15 ends hair cut of 27.52 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 15.
    *** Client id=15 departed. Freechairs = 5. Hair cut? true. Trials? 3. Clients departed: 16 ***

    *** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.

    ****                               ****
```

Simulation Results for BarberSaloon3.java

```
***          Barber Saloon Simulation 9          ***

***          Parameters          (panel of configuration)          ***

nClients=      16,      the nr total of clients
nChairs=       3,      the nr total of chairs (=> barber chair included).
minTimeHairCut= 15.0,   the minimum fixed time for hair cut (minutes).
variableTimeCut= 15.0,   for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0, for max time between hair cuts (minutes).
maxTimeBetweenClients= 45.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins= 120,   the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 5, the nr total of attempts to cut hair per client.

***          Begin Simulation Barber Saloon (Sleeping Barber)          ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 3.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 2. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.07 minutes...
Barber begins hair cut of 23.21 minutes. ClientId: 0 Freechairs = 2 Cut? false.
Client id=0 begins hair cut of 23.21 minutes.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 1. Trials: 1.
Barber begins hair cut of 23.21 minutes. ClientId: 0 Freechairs = 1 Cut? false.
Client id=0 ends hair cut of 23.21 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 1.
*** Client id=0 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 1 ***

Client id=1 begins hair cut of 24.22 minutes.
Client id=1 ends hair cut of 24.22 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 2.
*** Client id=1 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 2 ***

Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 17.82 minutes. ClientId: 2 Freechairs = 2 Cut? false.
Client id=2 begins hair cut of 17.82 minutes.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 1. Trials: 1.
Client id=2 ends hair cut of 17.82 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 3.
*** Client id=2 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 3 ***

Barber begins hair cut of 15.53 minutes. ClientId: 3 Freechairs = 2 Cut? false.
Client id=3 begins hair cut of 15.53 minutes.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 1. Trials: 1.
Barber begins hair cut of 15.53 minutes. ClientId: 3 Freechairs = 1 Cut? false.
Client id=3 ends hair cut of 15.53 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 4.
*** Client id=3 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 4 ***

Client id=4 begins hair cut of 19.2 minutes.
Client id=4 ends hair cut of 19.2 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 5.
*** Client id=4 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 5 ***

Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 28.32 minutes. ClientId: 5 Freechairs = 2 Cut? false.
Client id=5 begins hair cut of 28.32 minutes.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 1. Trials: 1.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 0. Trials: 1.
Barber begins hair cut of 28.32 minutes. ClientId: 5 Freechairs = 0 Cut? false.
Client id=5 ends hair cut of 28.32 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 6.
*** Client id=5 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 6 ***

Client id=6 begins hair cut of 15.58 minutes.
Client id=6 ends hair cut of 15.58 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 7.
*** Client id=6 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 7 ***

Client id=7 begins hair cut of 22.24 minutes.
Barber begins hair cut of 22.24 minutes. ClientId: 7 Freechairs = 2 Cut? false.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 1. Trials: 1.
Client id=7 ends hair cut of 22.24 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 8.
*** Client id=7 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 8 ***

Client id=8 begins hair cut of 20.28 minutes.
Barber begins hair cut of 20.28 minutes. ClientId: 8 Freechairs = 2 Cut? false.
Client id=8 ends hair cut of 20.28 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
*** Client id=8 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 9 ***

Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 2. Trials: 1.
Client id=9 begins hair cut of 24.23 minutes.
```

Simulation Results for BarberSaloon3.java

```
Barber begins hair cut of 24.23 minutes. ClientId: 9 Freechairs = 2 Cut? false.
Client id=9 ends hair cut of 24.23 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 10.
*** Client id=9 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 10 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 3.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 28.11 minutes. ClientId: 10 Freechairs = 2 Cut? false.
Client id=10 begins hair cut of 28.11 minutes.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 1. Trials: 1.
Client id=10 ends hair cut of 28.11 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 11 ***

Client id=11 begins hair cut of 20.13 minutes.
Barber begins hair cut of 20.13 minutes. ClientId: 11 Freechairs = 2 Cut? false.
Client id=11 ends hair cut of 20.13 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 3.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 27.97 minutes. ClientId: 12 Freechairs = 2 Cut? false.
Client id=12 begins hair cut of 27.97 minutes.
Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 1. Trials: 1.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 0. Trials: 1.
Client id=12 ends hair cut of 27.97 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id=13 begins hair cut of 26.12 minutes.
Barber begins hair cut of 26.12 minutes. ClientId: 13 Freechairs = 1 Cut? false.
Client id=13 ends hair cut of 26.12 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 14 ***

Client id=14 begins hair cut of 17.53 minutes.
Barber begins hair cut of 17.53 minutes. ClientId: 14 Freechairs = 2 Cut? false.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 1. Trials: 1.
Client id=14 ends hair cut of 17.53 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 15 ***

Client id=15 begins hair cut of 28.69 minutes.
Barber begins hair cut of 28.69 minutes. ClientId: 15 Freechairs = 2 Cut? false.
Client id=15 ends hair cut of 28.69 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 16 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 3.
*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.

****                                     ****

*****
***                                     Barber Saloon Simulation 10      ***
***                                     Parameters      (panel of configuration)      ***

nClients=          16,      the nr total of clients
nChairs=           5,      the nr total of chairs (=> barber chair included).
minTimeHairCut=    15.0,    the minimum fixed time for hair cut (minutes).
variableTimeCut=   15.0,    for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0,    for max time between hair cuts (minutes).
maxTimeBetweenClients= 120.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins=  120,    the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 3, the nr total of attempts to cut hair per client.

***                                     Begin Simulation Barber Saloon (Sleeping Barber)      ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
```

Simulation Results for BarberSaloon3.java

```
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 4. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.13 minutes...
      Barber begins hair cut of 27.7 minutes. ClientId: 0 Freechairs = 4 Cut? false.
      Client id=0 begins hair cut of 27.7 minutes.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 27.7 minutes. ClientId: 0 Freechairs = 3 Cut? false.
      Client id=0 ends hair cut of 27.7 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 1.
      *** Client id=0 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 1 ***

      Client id=1 begins hair cut of 25.72 minutes.
      Client id=1 ends hair cut of 25.72 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 2.
      *** Client id=1 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 2 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 4. Trials: 1.
      Barber begins hair cut of 19.91 minutes. ClientId: 2 Freechairs = 4 Cut? false.
      Client id=2 begins hair cut of 19.91 minutes.
      Client id=2 ends hair cut of 19.91 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 3.
      *** Client id=2 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 3 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 4. Trials: 1.
      Barber begins hair cut of 17.64 minutes. ClientId: 3 Freechairs = 4 Cut? false.
      Client id=3 begins hair cut of 17.64 minutes.
      Client id=3 ends hair cut of 17.64 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 4.
      *** Client id=3 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 4 ***

Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 4. Trials: 1.
      Barber begins hair cut of 22.36 minutes. ClientId: 4 Freechairs = 4 Cut? false.
      Client id=4 begins hair cut of 22.36 minutes.
      Client id=4 ends hair cut of 22.36 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 5.
      *** Client id=4 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 5 ***

Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 4. Trials: 1.
      Barber begins hair cut of 25.33 minutes. ClientId: 5 Freechairs = 4 Cut? false.
      Client id=5 begins hair cut of 25.33 minutes.
      Client id=5 ends hair cut of 25.33 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 6.
      *** Client id=5 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 6 ***

Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 4. Trials: 1.
      Barber begins hair cut of 24.49 minutes. ClientId: 6 Freechairs = 4 Cut? false.
      Client id=6 begins hair cut of 24.49 minutes.
      Client id=6 ends hair cut of 24.49 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 7.
      *** Client id=6 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 7 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 4. Trials: 1.
      Barber begins hair cut of 23.57 minutes. ClientId: 7 Freechairs = 4 Cut? false.
      Client id=7 begins hair cut of 23.57 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 3. Trials: 1.
      Client id=7 ends hair cut of 23.57 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 8.
      *** Client id=7 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 8 ***

      Barber begins hair cut of 20.27 minutes. ClientId: 8 Freechairs = 4 Cut? false.
      Client id=8 begins hair cut of 20.27 minutes.
      Client id=8 ends hair cut of 20.27 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 9.
      *** Client id=8 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 9 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 4. Trials: 1.
      Barber begins hair cut of 25.24 minutes. ClientId: 9 Freechairs = 4 Cut? false.
      Client id=9 begins hair cut of 25.24 minutes.
      Client id=9 ends hair cut of 25.24 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 10.
      *** Client id=9 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 10 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 4. Trials: 1.
      Barber begins hair cut of 24.39 minutes. ClientId: 10 Freechairs = 4 Cut? false.
      Client id=10 begins hair cut of 24.39 minutes.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 24.39 minutes. ClientId: 10 Freechairs = 3 Cut? false.
      Client id=10 ends hair cut of 24.39 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 11.
      *** Client id=10 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 11 ***

      Client id=11 begins hair cut of 22.36 minutes.
      Client id=11 ends hair cut of 22.36 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 12.
```


Simulation Results for BarberSaloon3.java

```
*** Client id=11 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 12 ***
>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 4. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.04 minutes...
Client id=12 begins hair cut of 23.13 minutes.
Client id=12 ends hair cut of 23.13 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 22.91 minutes. ClientId: 13 Freechairs = 4 Cut? false.
Client id=13 begins hair cut of 22.91 minutes.
Client id=13 ends hair cut of 22.91 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 14 ***

Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 22.32 minutes. ClientId: 14 Freechairs = 4 Cut? false.
Client id=14 begins hair cut of 22.32 minutes.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 22.32 minutes. ClientId: 14 Freechairs = 3 Cut? false.
Client id=14 ends hair cut of 22.32 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 15 ***

Client id=15 begins hair cut of 19.1 minutes.
Client id=15 ends hair cut of 19.1 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 16 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
*** Summary of Clients (threads) finished (joined) ***
```

```
Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
```

End Simulation

Web: <http://www.christianideas.eu> **Catholic Russia Converted Ideas, made in Belgium** Our Lady Of the Roses Honored / Exposed and the Death (possibly) Doesn't Come Inside Traduction Chrome Google, instructions en top de page (image available at www.christianideas.eu, if not visible)



Summary (of <http://www.christianideas.eu/#about>):

Simulation Results for [BarberSaloon3.java](#)

1. [ICON OF AUTOMATIC ETERNAL SALVATION](#) (also above)
2. **THOSE WHO TRUST* 100% IN JESUS, through THIS PICTURE, SHALL BE SAVED** (a Jesus of St Faustina with rays blue and red)
3. * - **WATCH OUT: IF YOU ACCEPT THE MARK 666 IN the BODY** (an electronic chip in the hand or in the forehead) **OR IF YOU WORSHIP THE ANTICHRIST OR HIS IMAGE, YOU FINISH IN HELL**, as the book of the Apocalypse 14:9-11 says, **EVEN IF YOU HONOR A DIVINE MERCY JESUS of Saint Faustina, with full trust...**
- 4.
5. [Idea to Become Rich, in a Pro God Way](#)
6. [Traps for Rich and For the Holy Host](#)
- 7.
8. [DISCERNMENT](#), e.g, **the True Faith is Catholic Conservative Non Naive. The Incorruptible Miraculous Corpses of the Catholic Saints (padre Pio) + the Holy Blood of Jesus show the Will of God for the Doctrine and the Authority of the Time.** Doctrine: **Catholic Roman Conservative and Authority: still the Pope.**
- 9.
10. [Danger of Apocalypse \(Prophecy of S. Malachy\): risk of the Sect New Age in Rome=> the Apocalypse...](#) => **it's better to be in state of grace and / or to go to Confession, asap, to Catholic Priest (after Benedict XVI), in case of sin, + to pray a Rosary, in the required conditions (to get a plenary* indulgence), to be a good practicing Catholic Conservative, to pray the daily Rosary (against the rest of evil).**
11. * - **with the reject of all sins, for the good intentions of the pope, in church, community or family. If it's not in church, community or family, pray it several times, to have the same effect...**
- 12.
13. [Risk of Great Famine => News from heaven +- serious to, e.g., Wings of Prophecy, L. de Maria, J. Leary...](#)
- 14.
15. **Ideas (pro God) to (try) to resist the Great Famine:**
 - a. [St Onofre, with a Crumb of Bread](#)
 - b. [Blessed grapes of L. de Maria + S. Damian](#)

Simulation Results for [BarberSaloon3.java](#)

16.

17. [MODERN LIES unmasked](#)

18. (Lies of Darwinism, Fake Dates...): **History + Demographics, since 2000BC, unmask the fake dates: the Earth was almost empty, after the Great Flood. Hominids were hybrids, which existed before the Great Flood,** confirms Jesus at [at the old web site from V. De Tarlé, apparitionsmariales.org](#) ... **proactive Darwinism: ~mouse evolves to =>bat=>vampire, thus, the ancestor of the man / whale, etc., goes to=>Batman=>Dracula, in the same ~millions of years...**

19.

20. Migrations based in Y Haplogroups (DNA) [tend to proof that Atlantis sank => Ice Ages, before the time of Moses? 'Science & Bible I' Theory](#)

21.

22. [DANGER OF Apocalypse:](#)

CHIP 666 IN BODY, WW3, dangerous vaccines, “good” sect New Age, THE GLOBAL EMPIRE SOCIALIST COMMUNIST OF the ANTICHRIST... => lots of apocalyptic prophecy at [www.tldm.org](#) (for scenario 'Russia Not Converted')

23.

24. [PROTECTIONS against EVIL](#)

25. E.g., [daily attentive Rosary](#) (a bit hard). Alternatively, pray the daily rosary twice or go to the daily mass + pray the daily rosary, as members of Opus Dei do... but some suffering needed, sorry!

26.

27. [IMMORTALITY SUGGESTION](#)

28. **TO PRAY GOD FOR the ETERNAL SALVATION OF THOSE WHO NEED IT MOST, 'only' CALMS DANGERS FOR LIFE.**

You have nothing to lose, with a correct use, if you feel dying, even if the formula is limited...

but: abuses risk to be severely punished

after: begin discreet fast + attentive daily prayer (as the Rosary), until it calms / improves
=> OK not so easy, but it's better than cancer operations, (1-4 days should calm grippe, + whiskey, at the bottom of the glass, to disinfect.....)

26.

27. [GLBT + Modern Sex BEHAVIORS UNHEALTHY, even KILL](#)

Simulation Results for [BarberSaloon3.java](#)

28. **It's possible to attack the subconscious, e.g., via discreet witchcraft... => [Nero case study...](#) risks of detached intestine...**
- 29.
30. **[~3.5 BILLION MURDERS, Through Abortions, SINCE ~1960](#)**
31. **[The ABORTION Horrors...](#)**
- 32.
33. [IDEAS AGAINST Evil, e.g., against AGING & GRIPPE / Pest](#)
34. **Fast & prayer (good against EVIL => Medjugorje) until it calms...(Discreet Fast & Prayer, in secret or in solidarity group, prayer as the (attentive daily) Rosary or the daily Rosary 2x)...** some food may help: avoid white sugars (fruits, honey, Stevia are better, if sweet food needed), but 1/8 glass whiskey or vodka (=> let it act a few minutes, in the throat... to disinfect...), 1/8 glass vinegar, 2 cloves raw good garlic mixed, e.g., in salad, to help to counter pest... + [Immortality Suggestion](#), in dramatic cases, to try to calm a bit, and, in place of dying, to win forces, to pray a Rosary / 7 sorrows... + Our Lady of the Roses Honored / Exposed and the Death (possibly) doesn't Come Inside. + details: links above, below
- 35.
36. **VACCINES TO BE AVOIDED.** Alternatives: Protections against the Apocalypse + Formula 'Fast & Prayer' (please see above)
- 37.
38. [IDEAS FOR A BETTER LOOK \(Ladies & Veil\)](#)
39. The Dream Lady is the Beautiful Blond Lady with Blue Eyes. Now it is Aesthetics. It is like the woman who marries with poor man or poorer man. It's better than nothing, but it bothers. [Comparative Tables](#) in the section '[Our Lady of Fatima deserves a better Look](#)'
- 40.
41. **[~3 BILLIONS MURDERS, Through Discreet Witchcraft, Since ~1960!!!](#)**
- 42.
43. [MODERN WOMAN IDEOLOGY UNMASKED](#)
44. Demographic Fall in the West (+ Russia)... statistics (1950 or) 1970-2023: [Germany x India...](#)
- 45.
46. [LINKS TO some HEAVEN NEWS](#)

Simulation Results for [BarberSaloon3.java](#)

47.

48. **Censured on X / Twitter: @ _ChristianIdeas** and **on Facebook** (before:
<https://www.facebook.com/christian.ideas>)

49.

50. **Possible:** *T shirts Posters “Songs” Christian Ideas and / or Russia Converted Catholic Ideas*
(‘made in Belgium’) ...

51.

52. [O Livro Digital, em Português, "Mistérios da Bíblia Revelados", já está Disponível.](#)

53.

54. [Ideas Against Cancer](#)

55.

56. [School](#) (e.g., Computer Science, Maths: exercises, complements to the Wikipedia...)

57.

58. **www.christianideas.eu Near Invisible in the Internet: Small Probabilities to find this Web site,**
e.g., via Google...

59.

60. [Christian Ideas at LinkedIn](#)
(<https://be.linkedin.com/in/christian-ideas-104ba893>)

If You Want to Defend Good,

[PROTECTIONS against EVIL](#) (+ take cross) Recommended:

- [IMMORTALITY SUGGESTION](#), correct use, in the 1st Sign of Danger; More information, in the Chapter ‘Against Death’

- To Do a [CONTRACT WITH GOD \(ICON of the AUTOMATIC SALVATION*, THROUGH DIVINE MERCY](#), available, e.g., at the picture above, right),

+

Simulation Results for [BarberSaloon3.java](#)

- to Pray, everyday (better: Attentively):

- the [7 sorrows of Mary \(small prayer\)](#)
- the Rosary**, 2x (or more)
- the Crusade Prayer 140, **against FEARS**,
- the Crusade Prayer 33, the short [Amsterdam prayer](#) (against catastrophes), etc.

- *to be clean of sins or to go to Confession, to the Catholic priest and to pray a Rosary, under the conditions required for a plenary indulgence**, as soon as possible...*

+ details, at www.christianideas.eu, e.g., at the Chapter 'Protections against Evil'; short prayers also below)

* - However, if the Concerned Person Submits to the Antichrist, this Promise is not Valid anymore...

** - it's better to pray the Rosary, in church, family or community, with rejection of all the sins, in state of grace, praying for the (good) intentions of the pope, in order to try to get a plenary indulgence...

I try to pray for the protection of all the pro God of the planet, until 00:00h, to try to disinfest, but it's better to complement it with 24h protective prayer, e.g., the attentive Rosary or (easier / shorter) the 7 sorrows (here below).

Satan demanded to God 75 - 100 years, + Money + Power, in order to destroy the Vatican => www.tldm.org.

Satan had that time, that money and that power. ~140 years later, despite the dangers + the evil, the Vatican still resists. Let us see evolution... ??? Apocalyptic? Reversal pro God (again)???

Evil doesn't triumph anymore, since ~2023, but Apocalyptic temptation persists. There's still, thus, Danger of Apocalypse, in the next ~50 years (if Apocalypse doesn't happens).

The best prepared (good prepared) are protected. The best is to prepare your self, asap, to try to be protected. More information, in the section 'How To Be Ready to Enter in the Paradise of God?' from the Chapter 'Discernment'.

Praying this small prayer, the Crusade prayer 33, from [the Seal of the Living God](#) (better to download it

Simulation Results for BarberSaloon3.java

also), seems to give protection from God, up to 00:00h, to you and your dear ones. The Crusade Prayer 33 follows:

“O my God, my loving Father, I accept with love and gratitude Your Divine Seal of Protection. Your Divinity encompasses my body and soul for eternity.
I bow in humble thanksgiving and offer my deep love and loyalty to You, my beloved Father. I beg You to protect me and my loved ones with this special Seal and I pledge my life to Your service forever and ever. I love You, dear Father. I console You in these times, dear Father.
I offer You the Body, Blood, Soul and Divinity of Your dearly beloved Son, in atonement for the sins of the world and for the salvation of all Your children. Amen.”

THE SEVEN SORROWS of Mary is a short prayer which doesn't allow evil to triumph, during 24h. The prayer consists of 7 Hail Marys, with sorrows: each hail Mary with a meditation (sorrow). The sorrows:

1. The prophecy of Simeon: Jesus would be polemic and thoughts of Mary public
2. The flight into Egypt, to protect baby God from king Herode
3. Child Jesus lost during 3 days (temple Jerusalem).
4. Way of the Cross.
5. Death of Jesus in cross.
6. Descent of the Body of Jesus from the Cross.
7. The burial of Jesus.

The Hail Mary:

Simulation Results for [BarberSaloon3.java](#)

"Hail Mary, full of grace, the Lord is with thee:

blessed art thou amongst women and blessed is the fruit of thy womb, Jesus.

Holy Mary, Mother of God, pray for us sinners now and at the hour of our death. Amen."

(Sources: <http://www.olrl.org/pray/> + www.tldm.org)